

GRASSED WATERWAY

PRACTICE INTRODUCTION

USDA, Natural Resources Conservation Service - practice code 412



GRASSED WATERWAY

A grassed waterway is a natural or constructed channel established in suitable vegetation for safe water disposal

PRACTICE INFORMATION

Waterways are constructed to convey runoff from terraces, diversions, or other concentrated flow areas where erosion control is needed.

The most critical time for successful installation of a grassed waterway is immediately following construction when the channel is bare and unprotected from runoff. Waterways are generally planted to perennial grass. It is critical during the vegetative establishment period to restrict outside water from flowing through the channel. Therefore, it may be necessary delay construction of terraces and/or diversions until the waterway is well established. Another critical consideration is the outlet at the lower end. If water

quality or protection of riparian vegetation (streambank) is an issue, the outlet end may need to widen significantly or another buffer or filtering type practice may be necessary. In addition, the waterway installation must assure that the runoff from the waterway does not cause gullies and/or overfalls to develop. Grassed waterways are multipurpose and provide one or more of the following benefits:

1. Safe disposal of runoff water
2. Erosion control in concentrated flow areas of a field
3. Improved water quality
4. Improved wildlife habitat
5. Reduced sediment damage
6. Improved landscape aesthetics

Additional information including standards and specifications are on file in the local NRCS Field Office Technical Guides

The following pages contain the conservation effects expected to occur when this practice is applied. These effects are subjective and somewhat dependent on variables such as climate, terrain, soil, etc. Users are cautioned that these effects are estimates that may or may not apply to a specific site.

CONSERVATION PRACTICE PHYSICAL EFFECT WORKSHEET

NOTE: recorded in Microsoft word 6.0 - use tabs to change cells/fields

STATE	Iowa	FIELD OFFICE		DATE	12/5/96
PRACTICE: 412 Grassed Waterway			NOTES:		
RESOURCE: SOIL			Help Message: Click on form field for choice lists.		
RESOURCE CONCERN: EROSION			Tab key to move around. "N/A" is the default.		
RESOURCE INDICATORS			PHYSICAL EFFECTS		
SHEET AND RILL			insignificant		
WIND			insignificant		
EPHEMERAL GULLY			significant reduction in ephemeral gully erosion		
CLASSIC GULLY			slight reduction in classic gully erosion		
STREAMBANK			insignificant		
IRRIGATION INDUCED			insignificant		
SOIL MASS MOVEMENT			N/A		
ROADBANK/CONSTRUCTION			N/A		
OTHER					
RESOURCE CONCERN: SOIL CONDITION					
SOIL TILTH			slight improvement in soil tilth		
SOIL COMPACTION			insignificant		
SOIL CONTAMINATION					
• SALTS			insignificant		
• ORGANICS			insignificant		
• FERTILIZERS			insignificant		
• PESTICIDES			insignificant		
• OTHER					
DEPOSITION/DAMAGE					
• ONSITE			slight reduction /onsite deposition damage		
• OFFSITE			significant decrease/offsite deposition damage		
DEPOSITION/SAFETY					
• ONSITE			N/A		
• OFFSITE			N/A		
OTHER					
RESOURCE: WATER					
RESOURCE CONCERN: WATER QUANTITY					
SEEPS			N/A		
RUNOFF/FLOODING			slight decrease in runoff/flooding		
EXCESS SUBSURFACE WATER			N/A		
INADEQUATE OUTLETS			significant improvement in H2O outlet concern		
WATER MGT. IRRIGATION					
• SURFACE			insignificant		
• SPRINKLER			insignificant		
WATER MGT. NON-IRRIGATED			insignificant		
RESTRICTED FLOW CAPACITY					
• ONSITE			insignificant		
• OFFSITE			insignificant		
RESTRICTED STORAGE			moderate reduction in sedimentation of H2O storage		
OTHER					

RESOURCE: WATER	
RESOURCE CONCERN: WATER QUALITY	
RESOURCE	PHYSICAL EFFECTS
GROUNDWATER CONTAMINANTS	
• PESTICIDES	slight reduction GWater contam./pesticides
• NUTRIENTS AND ORGANICS	slight poten. decrease/GWater contam./nutr.,organ.
• SALINITY	slight poten.decrease/GWater contam./salinity
• HEAVY METALS	slight poten. decrease/GWater contam./heavy metal
• PATHOGENS	slight poten. decrease/GWater contam./pathegens
• OTHER	
SURFACE WATER CONTAMINANTS	
• PESTICIDES	moderate reduction in SWater contam./pesticides
• NUTRIENTS AND ORGANICS	moderate reduction in SWater contam./nutri.,organ.
• SUSPENDED SEDIMENTS	sign. reduction in SWater contam./susp. sedi.
• LOW DISSOLVED OXYGEN	insignificant
• SALINITY	slight reduction in SWater contam./salinity
• HEAVY METALS	slight reduction in SWater contam./heavy metals
• WATER TEMPERATURE	N/A
• PATHOGENS	slight decrease in SWater contam./pathegens
AQUATIC HABITAT SUITABILITY	significant improvement in Aqua. Hab. Suit.
OTHER	
RESOURCE: AIR	
RESOURCE CONCERN: AIR QUALITY	
AIRBORNE SEDIMENT AND SMOKE PARTICLES	
• ONSITE SAFETY	N/A
• OFFSITE SAFETY	N/A
• ONSITE STRUCT. PROBLEMS	N/A
• OFFSITE STRUCT. PROBLEMS	N/A
• ONSITE HEALTH	N/A
• OFFSITE HEALTH	N/A
AIRBORNE SEDIMENT CAUSING CONVEYANCE PROBLEMS	N/A
AIRBORNE CHEMICAL DRIFT	N/A
AIRBORNE ODORS	N/A
FUNGI, MOLDS, AND POLLEN	N/A
OTHER	
RESOURCE CONCERN: AIR CONDITION	
AIR TEMPERATURE	N/A
AIR MOVEMENT (windbreak effect)	N/A
HUMIDITY	N/A
OTHER	

[illegible]

RESOURCE: HUMAN	
RESOURCE CONCERN: SOCIAL CONSIDERATIONS	
RESOURCE INDICATORS	PHYSICAL EFFECTS
PUBLIC HEALTH AND SAFETY	insignificant
PRIVATE/PUBLIC VALUES	insignificant
CLIENT CHARACTERISTICS	N/A
RISK TOLERANCE	N/A
TENURE	N/A
OTHER	
RESOURCE CONCERN: CULTURAL CONSIDERATIONS	
ABSENCE/PRESENCE OF CULTURAL RESOURCES	insignificant
SIGNIFICANCE OF CULTURAL RESOURCES	insignificant
MITIGATION OF NEGATIVE CULTURAL RES. IMPACTS	insignificant
OTHER	